

CLAIMS

1. A selection manifold for use with a beverage dispenser comprising:
 - a) a manifold block containing at least one cell, each cell having an outlet opening and at least first and second inlet openings;
 - b) a selector mechanism associated with each cell, the selector mechanism being actionable between
 - i) a first position in which fluid entering the cell from the first inlet opening may pass to the outlet opening and fluid from the second inlet is prevented from entering the cell, and
 - ii) a second position in which fluid entering the cell from the second inlet opening may pass to the outlet opening and fluid from the first inlet opening is prevented from entering the cell; and
 - c) a lock to prevent unintentional change of the selector mechanism between the first and second positions.
2. The selection manifold of claim 1 wherein the manifold block comprises at least two cells.
3. The selection manifold of claim 2 wherein the first inlet opening for each cell is supplied by a first manifold block inlet and the second inlet opening for each cell is supplied by a second manifold block inlet opening.
4. A selection manifold for use with a beverage dispenser comprising:
 - a) a manifold block containing at least one cell, each cell having an outlet opening and at least first and second inlet openings; and
 - b) a selector mechanism associated with each cell, wherein the selector mechanism comprises a cap with a channel, the selector mechanism being actionable between

- i) a first position in which fluid entering the cell from the first inlet opening may pass to the outlet opening and fluid from the second inlet is prevented from entering the cell, and
- ii) a second position in which fluid entering the cell from the second inlet opening may pass to the outlet opening and fluid from the first inlet opening is prevented from entering the cell.

5. The selection manifold of claim 4 wherein the first and second inlet openings reside on either side of the outlet opening.

6. The selection manifold of claim 5 wherein the channel provides a fluid conduit through which fluid enters the block though an inlet opening adjacent to the outlet opening.

7. (Original) A selection manifold for use with a beverage dispenser comprising:

- a) a manifold block containing at least one cell, each cell having an outlet opening positioned intermediate to first and second inlet openings; and
- b) a selector mechanism associated with each cell, wherein the selector mechanism comprises a plunger valve having a seal, the seal of the selector mechanism being transversely actionable with respect to the outlet opening between
 - i) a first position in which fluid entering the cell from the first inlet opening may pass to the outlet opening and fluid from the second inlet is prevented from entering the cell, and
 - ii) a second position in which fluid entering the cell from the second inlet opening may pass to the outlet opening and fluid from the first inlet opening is prevented from entering the cell.

8. A beverage selection manifold comprising a manifold block containing one outlet opening and two or more inlet openings and a selector mechanism that controls fluid communication between the outlet opening and

any one of the inlet openings, wherein the selector mechanism includes a lock to prevent an unintentional change in selection state.

9. The beverage selection manifold of claim 8 further comprising a multiple cells, each having an outlet opening and a selector mechanism.

10. The beverage selection manifold of claim 8 wherein the selector mechanism allows selection between carbonated water and non-carbonated water.

11. The beverage selection manifold of claim 8 wherein the selector mechanism allows selection between two or more beverages, including soda, beer and wine.

12. The beverage selection manifold of claim 8 wherein the selector mechanism includes a portion that extends past an outer edge of the manifold block enabling a viewer to determine the position of the selector mechanism associated with each cell.

13. The beverage selection manifold of claim 1 wherein the selector mechanism includes a portion that extends past an outer edge of the manifold block enabling a viewer to determine the position of the selector mechanism associated with each cell.

14. The beverage selection manifold of claim 8 wherein the selector mechanism comprises a shuttle valve, and wherein the lock comprises a movable retaining boss mounted to a section of the shuttle valve and a locking plate that abuts against the retaining boss when the retaining boss is moved into an aligned position with the locking plate.

15. The beverage selection manifold of claim 8 wherein the selector mechanism comprises a cap with a fluid channel therein, and wherein the lock comprises a retaining device to hold the cap against the manifold block.

16. A selection manifold for use with a beverage dispenser comprising:

- a) a manifold block containing a chamber, the chamber having an outlet opening and a first inlet opening opposite a second inlet opening;
- b) a rod protruding into the chamber through one of the first and second inlet openings; and
- c) a fluid seal mounted to an end of the rod, the fluid seal having a first side opposite a second side,

wherein the rod is actionable between a first position in which the first side of the fluid seal isolates the first opening from the chamber and the second opening remains in communication with the chamber, and a second position in which the second side of the fluid seal isolates the second opening from the chamber and the first opening remains in communication with the chamber.

17. The selection manifold of claim 16 wherein the manifold block comprises at least two cells.

18. The selection manifold of claim 16 wherein the first inlet opening for each cell is supplied by a first manifold block inlet and the second inlet opening for each cell is supplied by a second manifold block inlet opening.

19. A beverage selection manifold comprising:

- a) a manifold block containing an outlet opening positioned intermediate to first and second opposed inlet openings; and
- b) a fluid seal having a first seating surface opposite a second seating surface,

wherein the fluid seal is moveable to a first position in which the first seating surface seals the first inlet opening and the second inlet opening remains open, and to a second position in which the second seating surface seals the second inlet opening and the first inlet opening remains open.

20. A beverage selection manifold comprising:
 - a) a cell within a manifold body, the cell including an outlet opening and first and second inlet openings; and
 - b) a removable cap including a channel therein positionable adjacent to the cell in a first cap position and a second cap position, wherein the channel allows fluid communication between the outlet opening and the first inlet opening in the first position and between the outlet opening and the second inlet opening in the second position.
21. The beverage selection manifold of claim 20 further comprising an attachment device configured to hold the cap against the manifold body.
22. The beverage selection manifold of claim 20 wherein
 - a) in the first cap position, a fluid enters the manifold body from the first inlet opening and passes to the outlet opening through the channel of the removable cap and a fluid from the second inlet opening is prevented from entering the cell, and
 - b) in the second cap position, a fluid enters the cell from the second inlet opening and passes to the outlet opening through the channel of the removable cap and a fluid from the first inlet opening is prevented from entering the cell.
23. A method of switching a supply line to a dispensing valve comprising a user selecting the fluid supply to a beverage valve by activating a fluid seal between a first position in which a first side of the fluid seal closes a first fluid supply line, while allowing fluid to flow through a second fluid supply line, and a second position in which a second side of the fluid seal closes the second fluid supply line, while allowing fluid to flow through the first fluid supply line.
24. A method of switching a supply line to a dispensing valve comprising a user selecting the fluid supply to a beverage valve by positioning a cap in a first position in which a first side of the cap closes a first fluid supply

line, while allowing fluid to flow through a second fluid supply line, and a second position in which a second side of the cap closes a second fluid supply line, while allowing fluid to flow through the first fluid supply line.

25. A selection manifold for use with a beverage dispenser comprising:

- a) a valve body containing multiple cells, each cell having an outlet opening and first and second inlet openings;
- b) a rotatable shuttle valve associated with each cell, the rotatable shuttle valve including first and second o-rings separated by a reduced diameter section, the shuttle valve being actionable between
 - i) a first position in which fluid entering the cell from the first inlet opening may pass to the outlet opening and fluid from the second inlet is prevented from entering the cell by the second o-rings, and
 - ii) a second position in which fluid entering the cell from the second inlet opening may pass to the outlet opening and fluid from the first inlet opening is prevented from entering the cell by the fist o-rings;
- c) a retaining boss on the shuttle valve intermediate to first and second locking grooves,
- d) a locking plate positioned on the valve body,

wherein the shuttle valve can be rotated, such that the retaining boss abuts the locking plate and the locking plate engages one of the first and second locking grooves to prevent unintentional change of the selector mechanism between the first and second positions.

26. A selection manifold for use with a beverage dispenser comprising:

- a) a manifold block containing at least one cell, each cell having an outlet opening and at least first and second inlet openings; and
- b) a selector mechanism associated with each cell, the selector mechanism being actionable between
 - i) a first position in which fluid entering the cell from the first inlet opening may pass to the outlet opening and fluid from the second inlet is prevented from entering the cell, and
 - ii) a second position in which fluid entering the cell from the second inlet opening may pass to the outlet opening and fluid from the first inlet opening is prevented from entering the cell,
wherein the selector mechanism includes a portion that extends past an outer edge of the manifold block enabling a viewer to determine the position of the selector mechanism associated with each cell.

27. The selection manifold of claim 26 wherein the portion that extends past an outer edge of the manifold block comprises a handle that can be grasped by a user for positioning the selector mechanism to the first position or the second position.

28. A beverage selection manifold comprising:
- a) a manifold body;
 - b) a plurality of sections within the manifold body, each section including first and second outlet orifices and first and second inlet orifices; and
 - c) a plurality of removable caps each including a channel therein positionable adjacent to one of the sections in a first cap position and a second cap position,
wherein the channel provides a fluid outlet for the first outlet orifice in the first position and a fluid outlet for the second outlet orifice in the second position.

29. The beverage selection manifold of claim 28 further comprising an attachment device configured to hold the cap against the manifold body.

30. The beverage selection manifold of claim 28 wherein the carbonated water flows through the removable cap in the first position and non-carbonated water flows through the removable cap in the second position.

31. The beverage selection manifold of claim 28 wherein the beverage selection manifold is integrated into the mounting block for a mixing and dispensing valve.

32. A beverage selection manifold for controlling fluid flow therein of carbonated and non-carbonated water for mixing with a syrup to form a beverage, the manifold comprising:

a) a rectangular manifold body including multiple cells, each cell having first and second inlet orifices and first and second outlet orifices, wherein the first and second inlet orifices are connected to respective first and second elongated channels positioned in the rectangular manifold body; and

b) at least one detachable body, wherein the detachable body is configured to stop fluid flow from a first outlet orifice in a first position and from a second outlet orifice in a second position.

33. The beverage selection manifold of claim 32 wherein the detachable body further comprises a portion that extends past an outer edge of the manifold body, such that the portion can be grasped by a user for positioning the detachable body in the first position or the second position.

34. The beverage selection manifold of claim 32 wherein the first and second inlet orifices are configured for flow of carbonated and non-carbonated water, respectively, and wherein the detachable body enables

a selection of either carbonated water or non-carbonated water for each of first and second outlet orifices.

35. The beverage selection manifold of claim 32 wherein the beverage selection manifold is integrated into a mounting block for a mixing and dispensing valve.

36. The beverage selection manifold of claim 32 wherein the at least one detachable body comprises a removable cap including a channel therein, the cap positionable adjacent one of the cells in a first cap position and a second cap position, wherein the channel allows fluid communication between one of the first or second outlet openings and the first inlet fluid path in the first position and between one of the first or second outlet openings and the second inlet fluid path in the second position.

37. A beverage selection manifold comprising:

- a) a section within a manifold body, the section including first and second outlet openings and first and second inlet openings; and
- b) a positionable body including a fluid path therein positionable adjacent to the section in a first body position and a second body position,

wherein the fluid path provides a fluid outlet for the first outlet opening in the first position and a fluid outlet for the second outlet opening in the second position.

38. A method of switching a supply line to a mixing and dispensing valve comprising:

- a) providing a plurality of mixing and dispensing valves in fluid communication with a manifold block, the manifold block having a carbonated water channel and a noncarbonated water channel therethrough and a plurality of paired first and second outlet openings, each pair associated with one of the mixing and dispensing valves;

- b) providing a removable selector for each of the plurality of mixing and dispensing valves;
- c) connecting one of the removable selectors to one of a carbonated water supply or a non-carbonated water supply to a selected one of the plurality of mixing and dispensing valves by positioning a first removable selector in a first position in which the removable selector closes the first paired outlet opening, while allowing carbonated water or non-carbonated water to flow through the second paired outlet opening; and thereafter
 - d) switching the first removable selector body to select the other of a carbonated water supply or a non-carbonated water supply to the selected one of the plurality of mixing and dispensing valves by positioning the first removable selector body in a second position in which the first removable selector body closes the second paired outlet opening, while allowing carbonated water or noncarbonated water to flow through the first paired outlet opening.

39. The method of claim 38 wherein positioning the first removable selector body in a first position comprises:

- a) grasping a portion of the first removable selector body that extends past an outer edge of the manifold block and removing the first removable selector body from the manifold block; and
- b) returning the first removable selector body to the manifold block in the second position.

40. The method of claim 38 further comprising positioning a retaining device against the manifold block to hold the first removable selector body in place.

41. (New) A method of setting up a beverage dispenser comprising:
- a) providing the beverage dispenser with a beverage selection manifold comprising:

i) a manifold block having first and second inlet channels therethrough and at least five paired first and second outlet openings therein; and

ii) a removable selector body associated with each paired first and second outlet opening;

b) positioning one of the removable selector bodies in a first position in which carbonated water entering the manifold block through the first inlet channel passes through the first paired outlet opening and noncarbonated water from the second inlet channel is prevented from passing through the second outlet opening; and

c) positioning another of the removable selector bodies in a second position in which noncarbonated water entering the manifold block through the second inlet channel passes through the second paired outlet opening and carbonated water from the first inlet channel is prevented from passing through the first paired outlet opening.

42. The method of claim 41 further comprising attaching a retaining device to the manifold block to prevent unintentional change of one or more of the removable selector bodies between the first position and the second position.

43. A beverage selection manifold for controlling fluid flow therein of carbonated and non-carbonated water for mixing with a syrup to form a beverage, the manifold comprising:

a) a manifold body including multiple cells, each cell having first and second inlet orifices and first and second outlet orifices,

wherein the first and second inlet orifices are connected to respective first and second elongated channels positioned in the manifold body; and

b) at least one detachable body,

wherein the at least one detachable body is configured to stop fluid flow from a first outlet orifice in a first position and from a second outlet orifice in a second position; and

(c) a retaining device to prevent unintentional change of the at least one detachable body between the first and second position.

44. The beverage selection manifold of claim 43 wherein the at least one detachable body further comprises a portion that extends past an outer edge of the manifold body, such that the portion can be grasped by a user for positioning the detachable body in the first position or the second position.

45. The beverage selection manifold of claim 56 wherein the first and second inlet orifices are configured for flow of carbonated and non-carbonated water, respectively, and wherein the detachable body enables a selection of either carbonated water or non-carbonated water for each of the first and second outlet orifices.

46. The beverage selection manifold of claim 43 wherein the first and second elongated channels comprise independent channels in the manifold body, each elongated channel having an opening at an end surface of the manifold body, and wherein the openings are adjacent to one another at the end surface.

47. The beverage selection manifold of claim 43 wherein the at least one detachable body comprises a body having a fluid channel therethrough.

48. The beverage selection manifold of claim 43 wherein the manifold body comprises a thermoplastic material.

49. The beverage selection manifold of claim 43 wherein the manifold body is integrated into a mounting block for a beverage dispenser.

50. The beverage selection manifold of claim 43 wherein the at least one detachable body comprises a removable cap including a channel therein, the cap positionable adjacent one of the cells in a first cap position and a second cap position, wherein the channel allows fluid communication between one of the first or second outlet orifices and the first inlet orifice in the first

position and between one of the first or second outlet orifices and the second inlet orifice in the second position.

51. A beverage selection manifold for controlling fluid flow therein of carbonated and non-carbonated water for mixing with a syrup to form a beverage, the manifold comprising:

a) a rectangular manifold body including multiple cells, each cell having first and second inlet orifices and first and second outlet orifices, wherein the first and second inlet orifices are connected to respective first and second elongated channels positioned in the rectangular manifold body; and

b) at least one detachable body, wherein the detachable body is configured to stop fluid flow from a first outlet orifice in a first position and from a second outlet orifice in a second position, and wherein the at least one detachable body further comprises a portion that extends past an outer edge of the rectangular manifold body, such that the portion can be grasped by a user for positioning the at least one detachable body in the first position or the second position.

52. The beverage selection manifold of claim 51 wherein the at least one detachable body comprises a removable cap including a channel therein, the cap positionable adjacent one of the cells in a first cap position and a second cap position, wherein the channel allows fluid communication between one of the first or second outlet orifices and the first inlet orifice in the first position and between one of the first or second outlet orifices and the second inlet orifice in the second position.